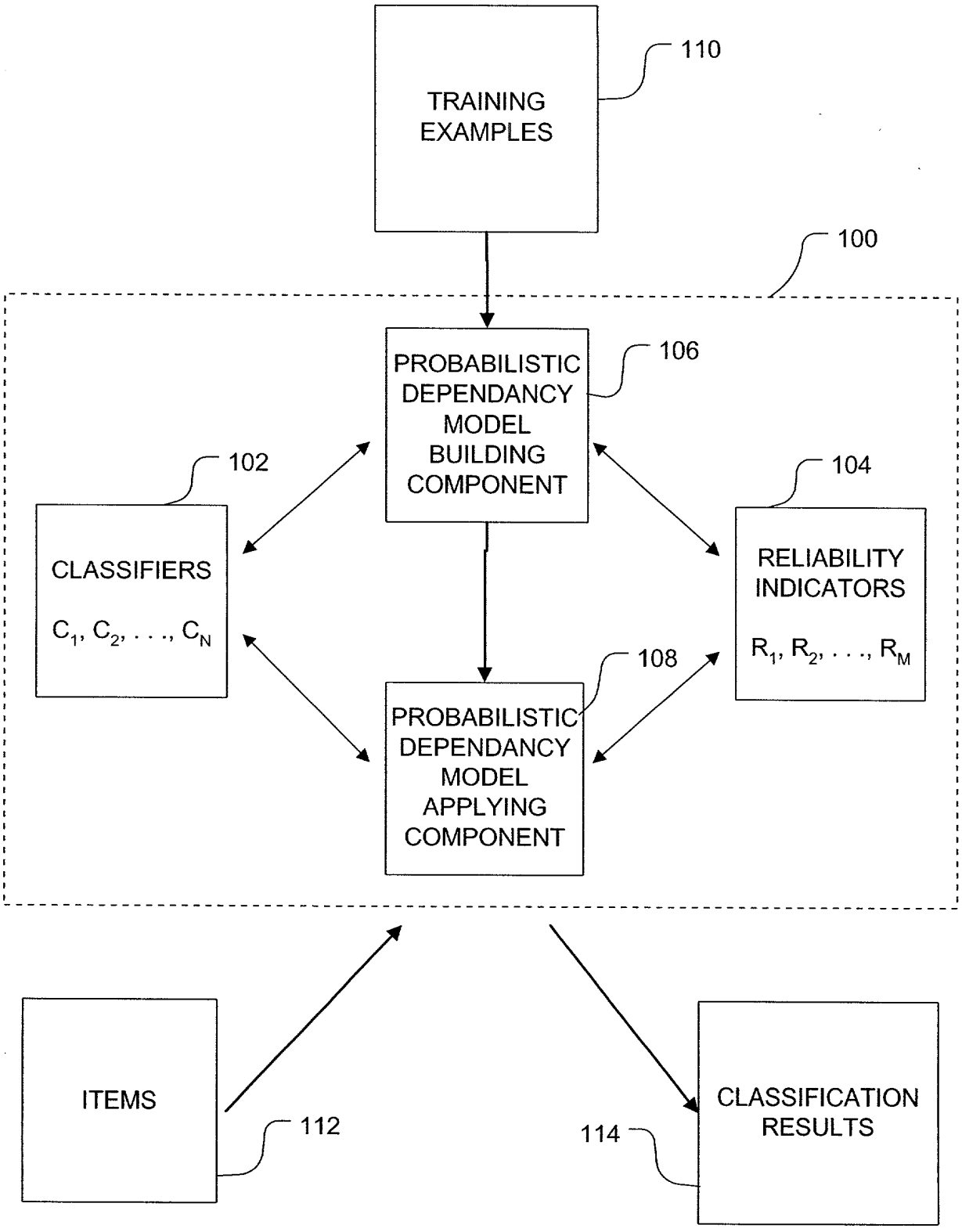

TRAINING EXAMPLES
110
100
PROBABILISTIC DEPENDANCY MODEL BUILDING COMPONENT
106
102
CLASSIFIERS
$C_1, C_2, \ldots, C_N$
104
RELIABILITY INDICATORS
$R_1, R_2, \ldots, R_M$
108
PROBABILISTIC DEPENDANCY MODEL APPLYING COMPONENT
ITEMS
112
CLASSIFICATION RESULTS
114

Fig. 1

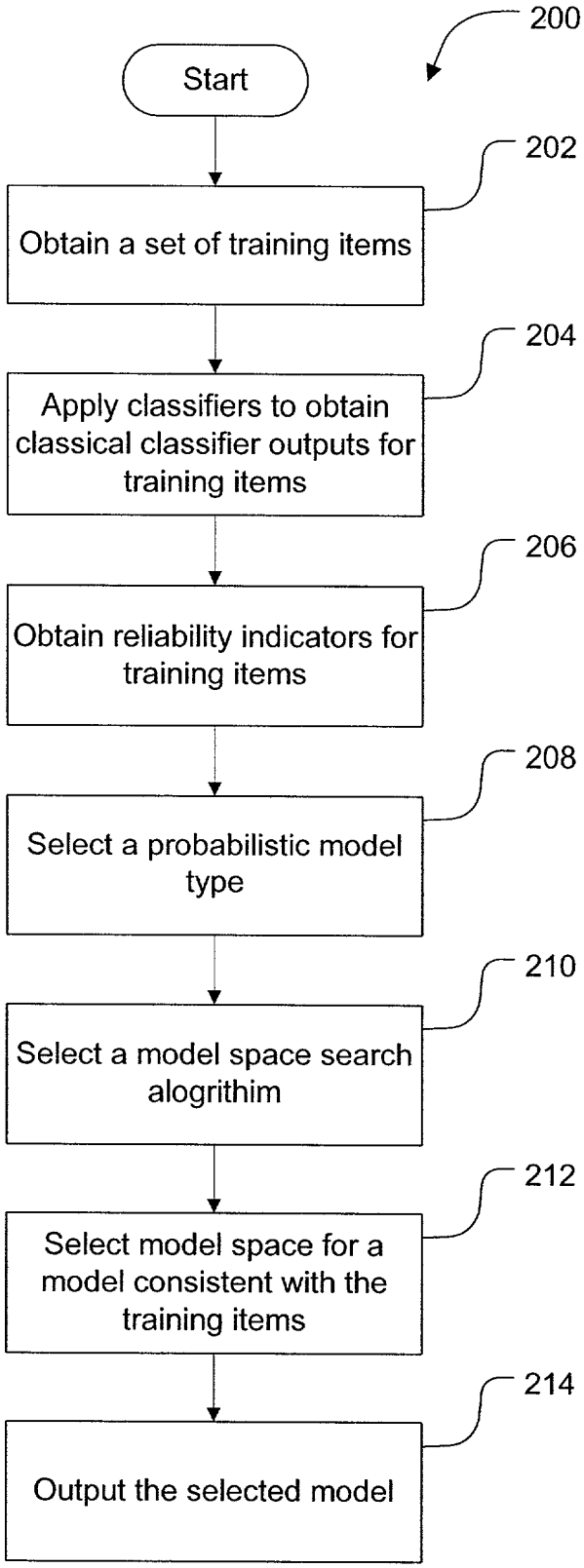

200
Start
202
Obtain a set of training items
204
Apply classifiers to obtain classical classifier outputs for training items
206
Obtain reliability indicators for training items
208
Select a probabilistic model type
210
Select a model space search alogrithim
212
Select model space for a model consistent with the training items
214
Output the selected model

Fig. 2

Exhibit 2105.pdf

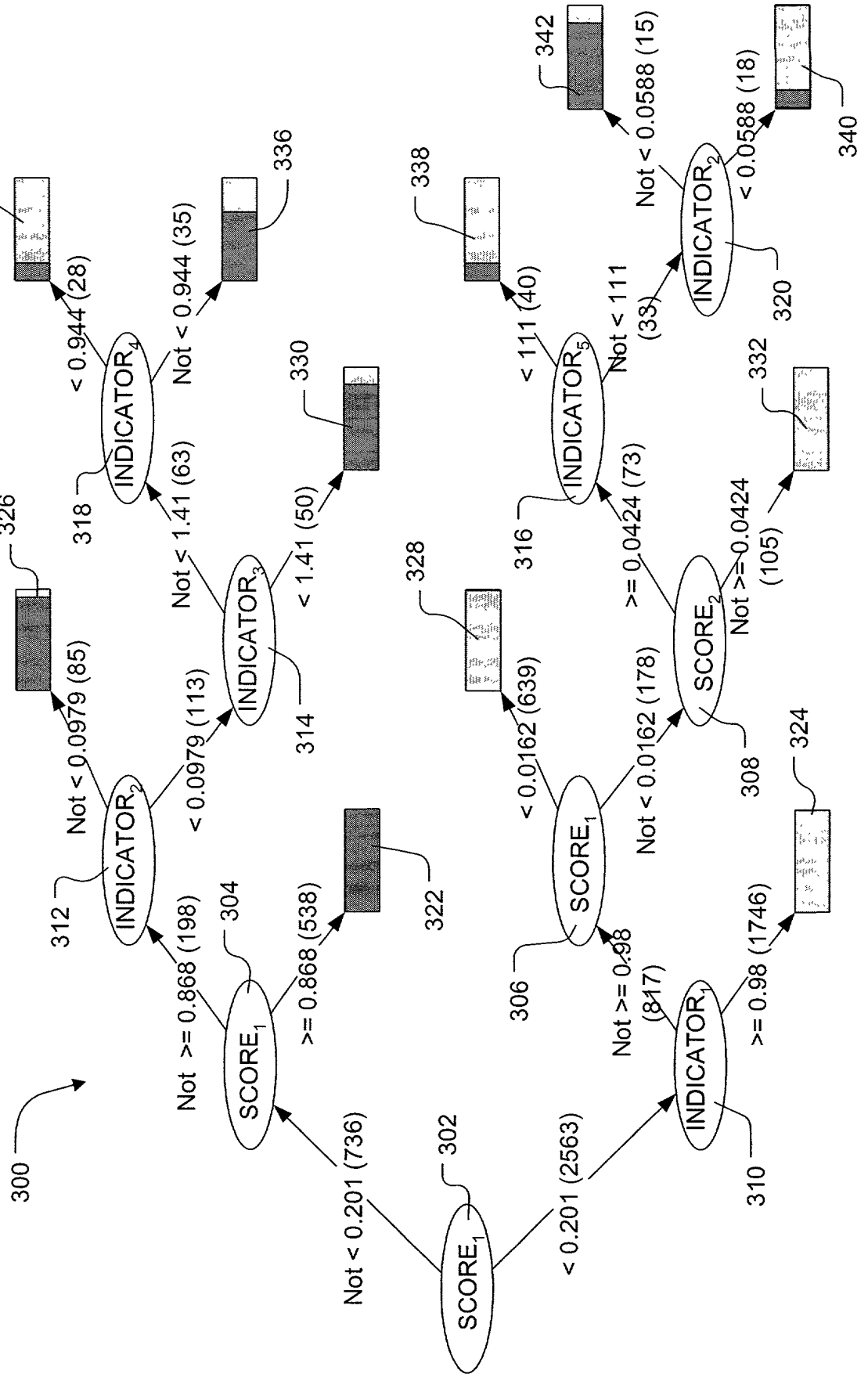


Fig. 3

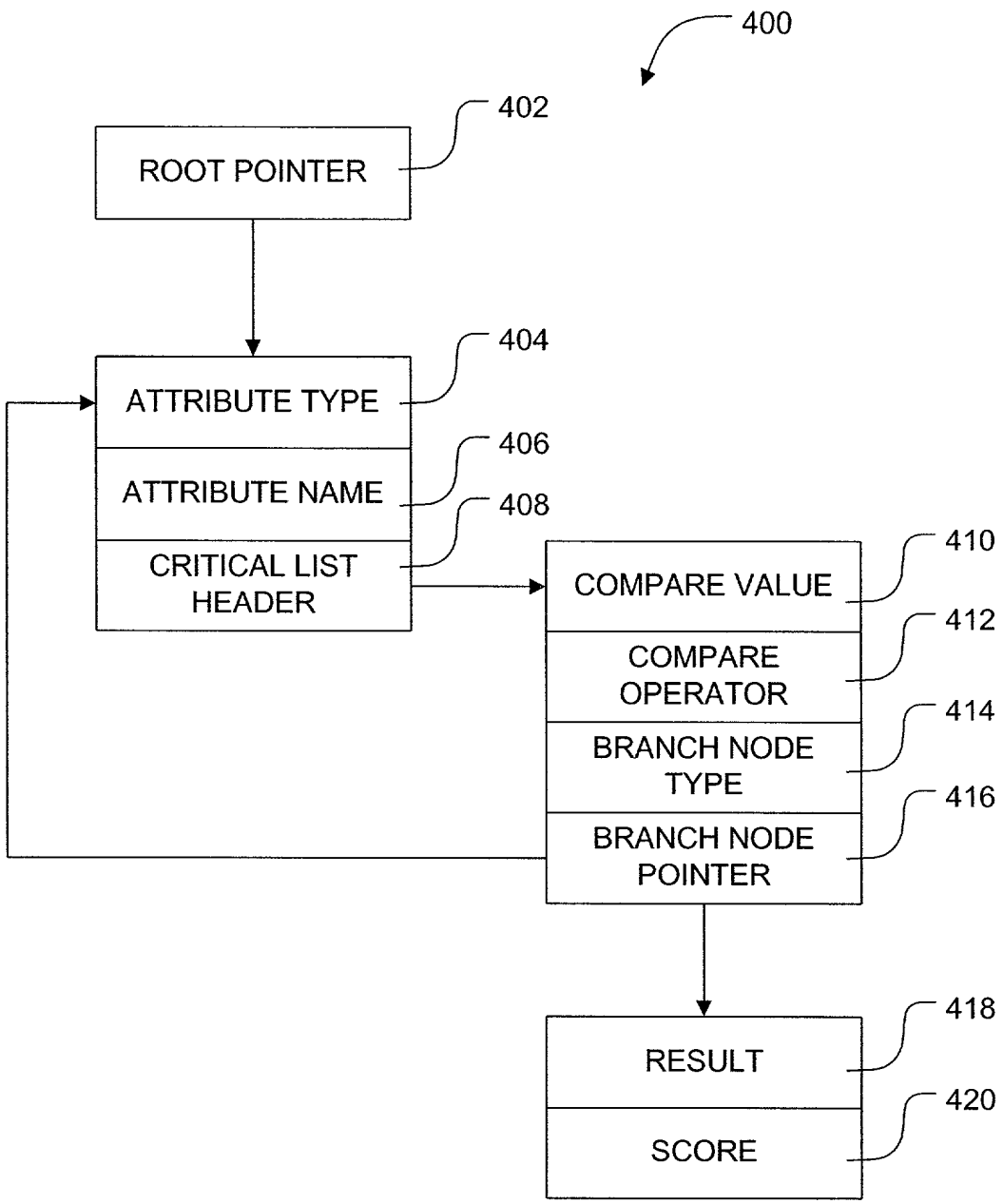

400
402
ROOT POINTER
404
ATTRIBUTE TYPE
406
ATTRIBUTE NAME
408
CRITICAL LIST HEADER
410
COMPARE VALUE
412
COMPARE OPERATOR
414
BRANCH NODE TYPE
416
BRANCH NODE POINTER
418
RESULT
420
SCORE

Fig. 4

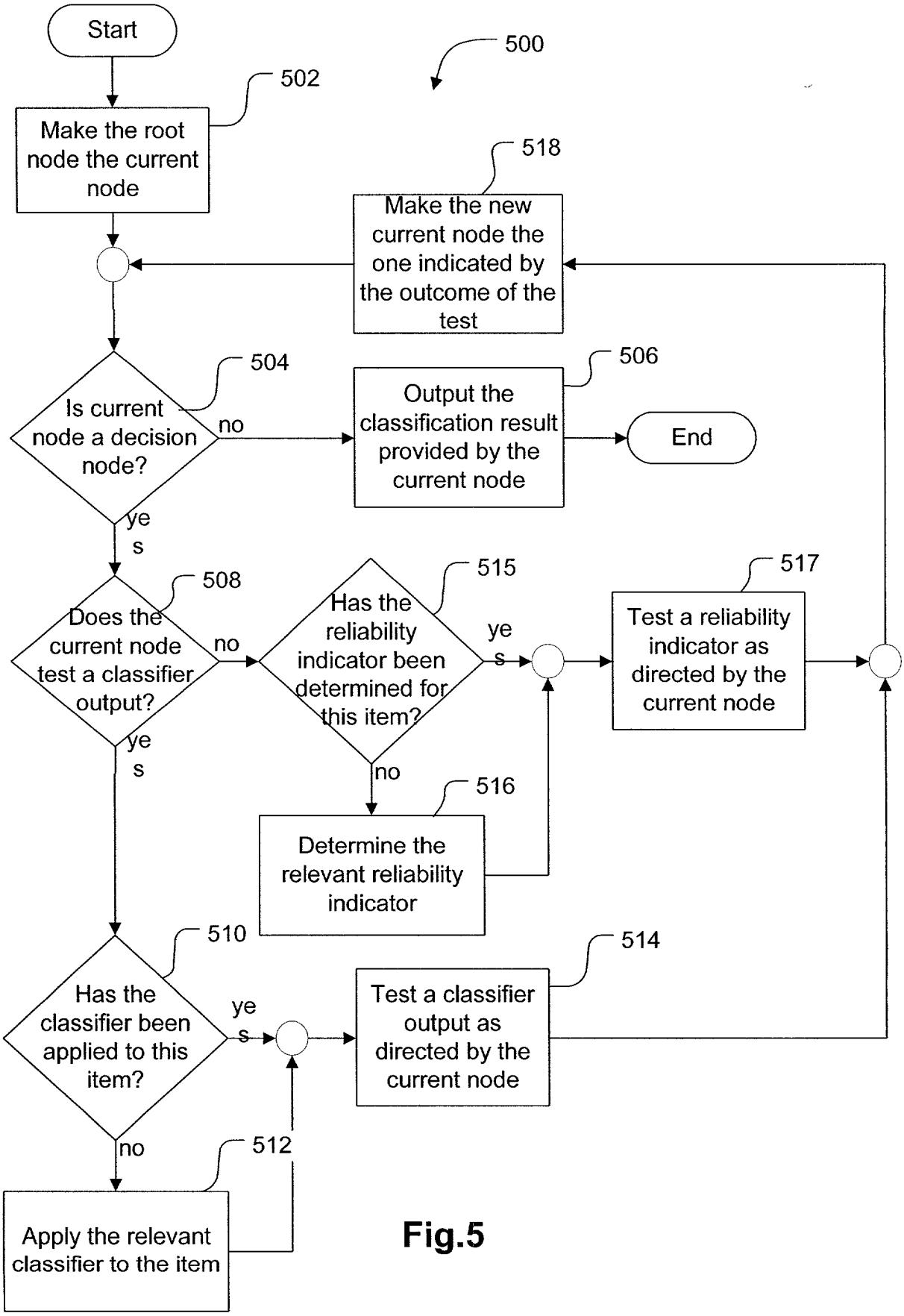

Start
500
502
Make the root node the current node
518
Make the new current node the one indicated by the outcome of the test
504
Is current node a decision node?
no
506
Output the classification result provided by the current node
End
yes
508
Does the current node test a classifier output?
no
515
Has the reliability indicator been determined for this item?
yes
517
Test a reliability indicator as directed by the current node
yes
no
516
Determine the relevant reliability indicator
510
Has the classifier been applied to this item?
yes
514
Test a classifier output as directed by the current node
no
512
Apply the relevant classifier to the item

Fig.5

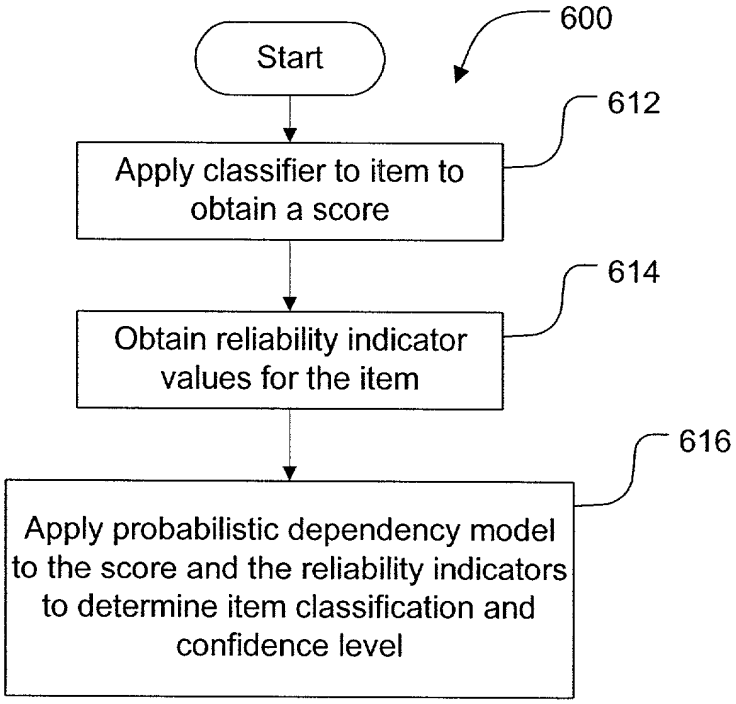

600
Start
612
Apply classifier to item to obtain a score
614
Obtain reliability indicator values for the item
616
Apply probabilistic dependency model to the score and the reliability indicators to determine item classification and confidence level

Fig. 6

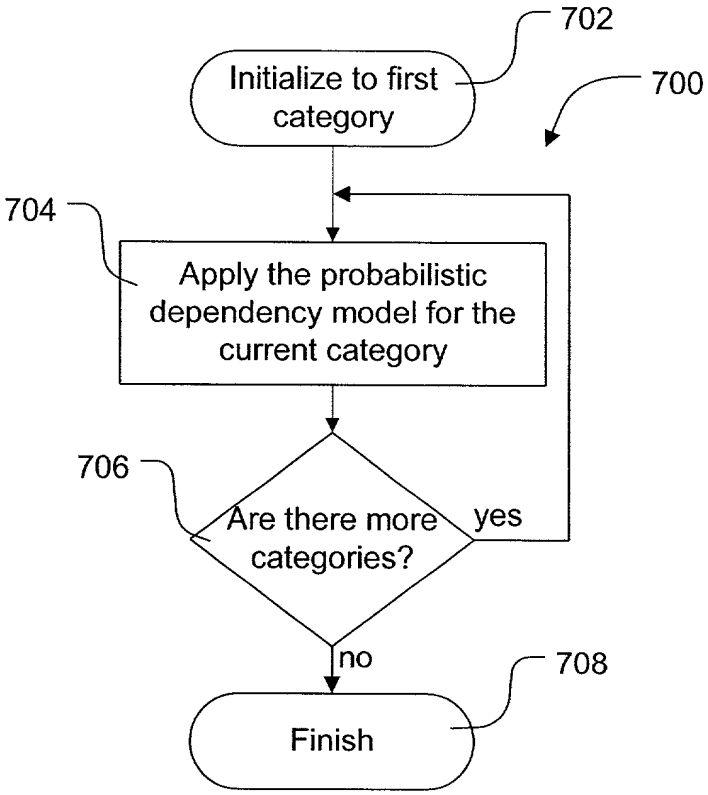
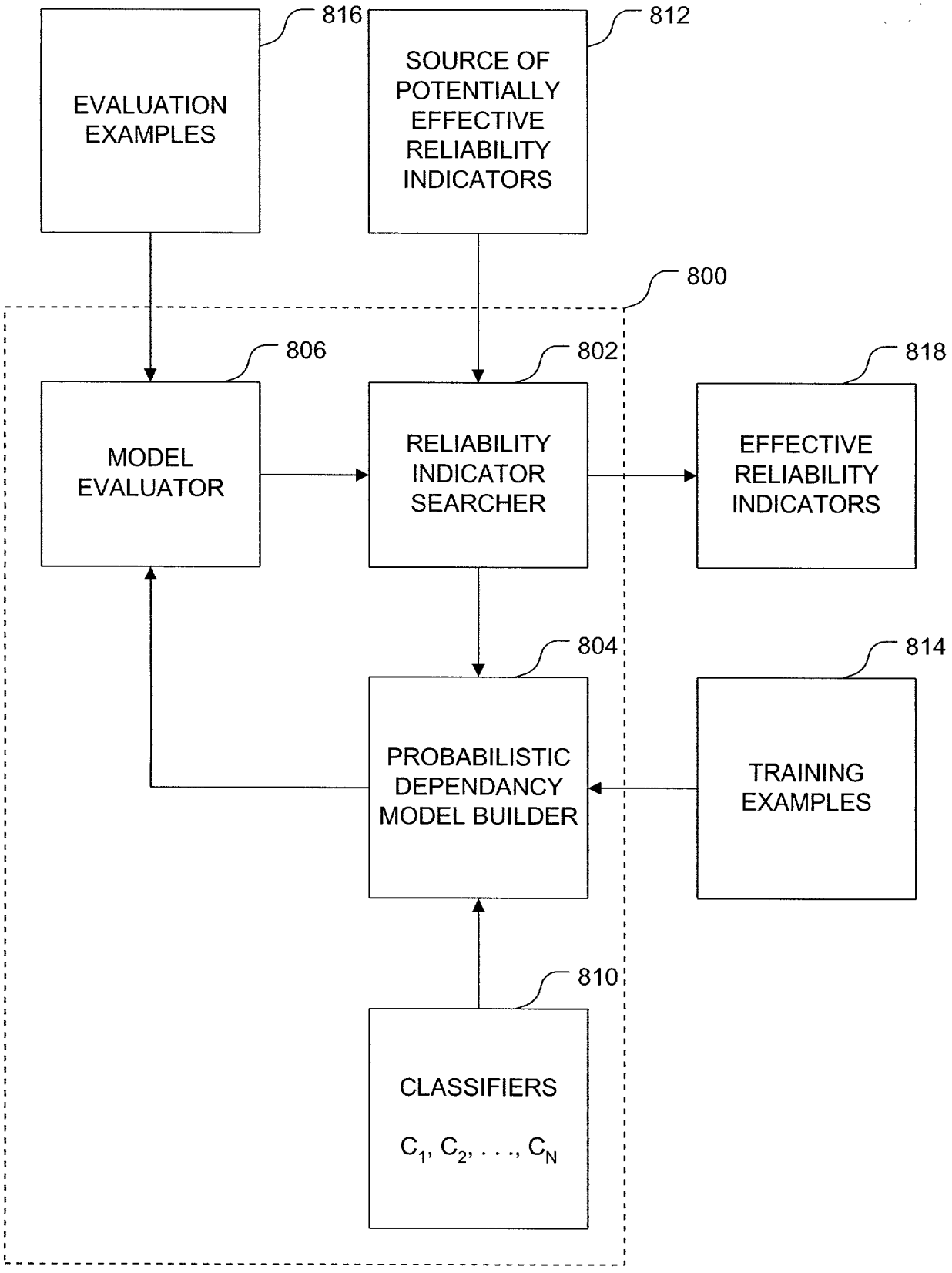

702
Initialize to first category
700
704
Apply the probabilistic dependency model for the current category
706
Are there more categories?
yes
no
708
Finish

Fig. 7


816
812
EVALUATION EXAMPLES
SOURCE OF POTENTIALLY EFFECTIVE RELIABILITY INDICATORS
800
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MODEL EVALUATOR
RELIABILITY INDICATOR SEARCHER
EFFECTIVE RELIABILITY INDICATORS
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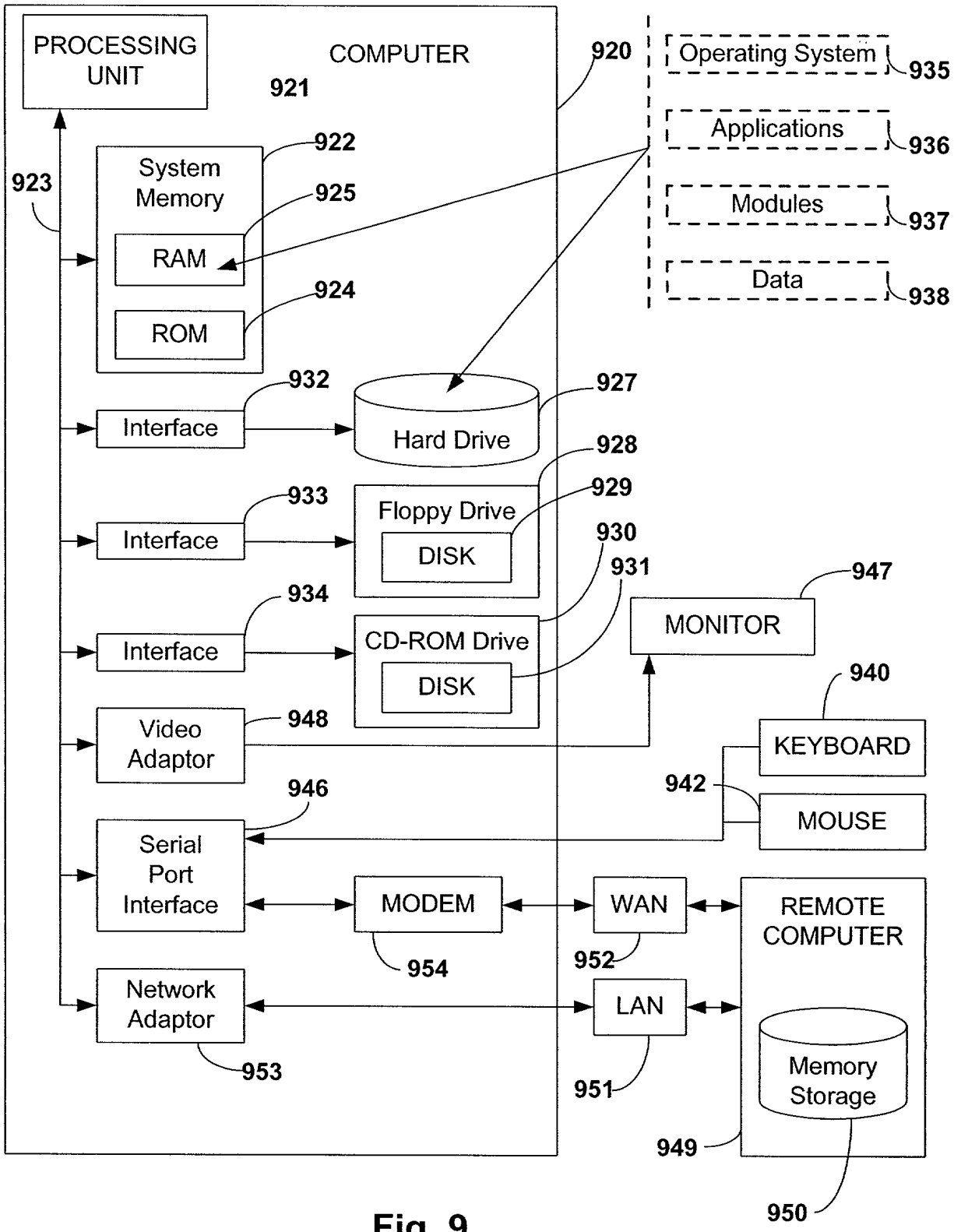
PROBABILISTIC DEPENDANCY MODEL BUILDER
TRAINING EXAMPLES
810
CLASSIFIERS
$C_1, C_2, \ldots, C_N$

Fig. 8


PROCESSING UNIT
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Interface
Floppy Drive
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DISK
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Interface
CD-ROM Drive
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MONITOR
940
948
Video Adaptor
KEYBOARD
942
MOUSE
946
Serial Port Interface
MODEM
954
WAN
952
REMOTE COMPUTER
Network Adaptor
953
LAN
951
Memory Storage
949
950

Fig. 9